WHAT IS CLAIMED IS:

1. An optical add/drop multiplexer comprising:

a multiplexing/demultiplexing unit including an input multiplexing port, an output multiplexing port and a plurality of demultiplexing ports;

connected to respective ones of the plural demultiplexing ports, a plurality of optical circulators each including a first port for internally inputting an added channel, a second port for outputting the added channel over the connection to the output multiplexing port and for receiving a channel over the connection from the input multiplexing port, and a third port for externally outputting the channel received over the connection; and

associated with a first one and a second one of the plural optical circulators, an optical switch that includes:

a first input port, coupled to the third port of said first one, for receiving said channel received by said first one;

a second input port for receiving said added channel to be outputted by said second one;

a first output port, coupled to said first port of said second one, for outputting said added channel to said first port of the second one; and

a second output port for externally outputting said channel received by said first one according to a dropping operation.

2. The optical add/drop multiplexer of claim 1, wherein each of the plural optical circulators is associated, as said first one, with a respective optical switch that includes the first and second input ports and the first and second output ports.

3. The optical add/drop multiplexer of claim 2, wherein each of the plural optical circulators is associated, as said second one, with a respective optical switch that includes the first and second input ports and the first and second output ports.

4. The optical add/drop multiplexer of claim 1, wherein an input optical fiber is coupled to said input multiplexing port and wherein an output optical fiber is coupled to said output multiplexing port.

5. The optical add/drop multiplexer as set forth in claim 1, wherein the multiplexing/demultiplexing unit uses a 2 x N arrayed-waveguide grating.

6. The optical add/drop multiplexer as set forth in claim 1, wherein said optical switch is configured to route a bypass channel from the first input port of said switch to the first output port of said switch.

7. The optical add/drop multiplexer as set forth in claim 6, wherein said optical switch is configured to determine if said channel received by said first one is said bypass channel.

8. The optical add/drop multiplexer as set forth in claim 7, wherein said optical switch is configured to externally output through the second output port said channel received by said first one according to said dropping operation if said channel received is determined to be other than said bypass channel.

9. The optical add/drop multiplexer of claim 8, wherein each of the plural optical circulators is associated, as said first one, with a respective optical switch that includes the first and second input ports and the first and second output ports.

10. The optical add/drop multiplexer of claim 9, wherein each of the plural optical circulators is associated, as said second one, with a respective optical switch that includes the first and second input ports and the first and second output ports.

11. An optical add/drop multiplexing method comprising the steps of:

connecting to respective ones of plural demultiplexing ports, a plurality of optical circulators each including a first port for internally inputting an added channel, a second port for outputting the added channel over the connection to the output multiplexing port and for receiving a channel over the connection from the input multiplexing port, and a third port for externally outputting the channel received over the connection; and

associating a first one and a second one of the plural optical circulators with an optical switch by configuring the switch to include:

a first input port, coupled to the third port of said first one, for receiving said channel received by said first one;

a second input port for receiving said added channel to be outputted by said second one;

a first output port, coupled to said first port of said second one, for outputting said added channel to said first port of the second one; and

a second output port for externally outputting said channel received by said first one according to a dropping operation.

12. The method of claim 11, wherein each of the plural optical circulators is associated, as said first one, with a respective optical switch that includes the first and second input ports and the first and second output ports.

13. The method of claim 12, wherein each of the plural optical circulators is associated, as said second one, with a respective optical switch that includes the first and second input ports and the first and second output ports.

14. The method of claim 11, further including the steps of coupling an input optical fiber to said input multiplexing port and coupling an output optical fiber to said output multiplexing port.

15. The method as set forth in claim 11, wherein the multiplexing/demultiplexing unit uses a 2 x N arrayed-waveguide grating.

16. The method as set forth in claim 11, wherein said optical switch is configured to route a bypass channel from the first input port of said switch to the first output port of said switch.

17. The method as set forth in claim 16, wherein said optical switch is configured to determine if said channel received by said first one is said bypass channel.

18. The method as set forth in claim 17, wherein said optical switch is configured to externally output through the second output port said channel received by said first one according to said dropping operation if said channel received is determined to be other than

said bypass channel.

19. The method of claim 18, wherein each of the plural optical circulators is associated, as said first one, with a respective optical switch that includes the first and second input ports and the first and second output ports.

20. The method of claim 19, wherein each of the plural optical circulators is associated, as said second one, with a respective optical switch that includes the first and second input ports and the first and second output ports.